

35.G1548



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

33 / Response
K. Tyson
2/28/01

In re Application of:)
: Examiner: K. Cuneo
NORIO KANEKO)
: Group Art Unit: 2831
Application No.: 08/528,538)
: Filed: September 14, 1995)
: For: OXIDE SUPERCONDUCTING)
: WIRE WITH SILVER)
: DISPERSED WITHIN AND)
: A CONDUCTIVE COATING)
: ON ITS SURFACE (AS)
: AMENDED)
: October 11, 2000

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Commissioner for Patents
Washington, D.C. 20231

REQUEST FOR WITHDRAWAL OF FINALITY OF OFFICE
ACTION DATED SEPTEMBER 26, 2000, OR, ALTERNATIVELY,
CLARIFICATION AND RECONSIDERATION THEREOF AND
CONTINGENT PETITION FOR SUCH RELIEF

Applicant hereby requests reconsideration and
withdrawal of the finality of the Office Action dated
September 26, 2000, and/or clarification thereof, and in
support hereof, states the following:

I. BACKGROUND AND PROSECUTION HISTORY

The above-captioned application is a second
Continued Prosecution Application ("CPA") of the original
application filed on September 14, 1995. The presently

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claimed invention is directed to a superconducting wire comprising a fine line of sintered, compact oxide superconductor having dispersed therein particles of a solidified metallic material that fills the voids in the oxide superconductor. The outer coating of a conductive material comprises a metal with a melting point higher than that of the solidified metallic material. By filling the voids in the oxide superconductor, the solidified metallic material improves the critical current that can be maintained by the wire. Also, the use of added elements M, C, B, Ti in the oxide superconductor results in improved density of critical current and improved mechanical strength.

On December 6, 1999 Applicant filed a second Continued Prosecution Application to obtain entry of an amendment previously filed on October 5, 1999 under 37 C.F.R. § 1.116.

A. First Office Action

A first Office Action in the second CPA was mailed January 20, 2000. See Office Action dated January 20, 2000, in which pending claims 1-3, 22 and 23 were rejected over the art applied. A true and correct copy of that action is

attached hereto as Exhibit "A". In this Office Action, among other things, the Examiner:

a) rejected claims 23, 2-3 and 22 under 37 C.F.R. § 103(a) as obvious over U.S. Patent No. 5,545,613 (Yurek). In particular, the Examiner has stated that "it is well known in the superconducting arts to make the outer sheath of wires from [copper, gold or aluminum] and their alloys. Selecting the conductive material as such necessarily makes the melting point of the conductive material higher than the solidified metallic material, silver (claim 23)";

b) rejected claim 1 under 37 C.F.R. § 103(a) as obvious over U.S. Patent No. 5,512,538 (Den).

B. Applicant's Amendment

On July 20, 2000, Applicant responded to the first Office Action by timely filing an Amendment and paying the requisite extension fee. See Amendment dated July 20, 2000, a true and correct copy of which is attached hereto as Exhibit "B". Responding to the rejections set forth by the Examiner, Applicant:

a) argued and requested that the Examiner provide a secondary reference to support an allegation that it was

"well-known" in the art to ensheath superconducting oxides in copper, gold, aluminum, or an alloy thereof. See 37 C.F.R. 1.104(d)(2) and M.P.E.P. § 2144.03;

b) traversed the rejection based on Yurek, arguing the differences between this reference and the claimed invention, as is more fully explained on pages 6 and 7 hereafter; and

c) traversed the rejection based on Den providing reasons for non-obviousness.

C. Second Office Action

On September 26, 2000, a second Office Action was mailed. A true and correct copy of this second Office Action is attached hereto as Exhibit "C". Therein, the Examiner:

a) repeated the art rejections from the first office action word for word, providing two references requested by Applicant in the July 20, 2000 response to support the allegation that it was "well-known" to ensheath superconducting oxides;

b) responded only to the argument regarding the lack of references for supporting the allegation of common knowledge in the art; and

c) made this second Office Action final.

II. REQUEST FOR WITHDRAWAL OF FINALITY, OR,
ALTERNATIVELY, CLARIFICATION AND RECONSIDERATION

Applicant specifically requests that the finality of the pending Office Action be withdrawn, and that a new Office Action be issued responsive to Applicant's Amendment and this paper. Alternatively, clarification and reconsideration of paragraphs 2 and 3 of the second Office Action is requested.

In paragraphs 2 and 3 of the second Office Action, the Examiner has repeated the rejections based on Yurek and Den in identical words of the previous Office Action. The Examiner's response did not differ in any material respect. The Examiner merely supplied references in support of an allegation that it was well-known in the art to ensheath superconducting oxides in copper, gold, aluminum, or an alloy thereof.

The Examiner has clearly failed to respond to the merits of Applicant's arguments regarding Yurek and Den. In paragraph 4 of the second Office Action, the Examiner has stated that "Applicant's argument has been reviewed, but is not persuasive." Second Office Action dated September 26,

2000, page 3 (emphasis added). The M.P.E.P. section entitled

"Answer All Material Traversed," states, in pertinent part:

Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.

M.P.E.P. § 707.07(f) (emphasis added).

As evidenced by paragraph 4 of the second Office Action, the Examiner has addressed only one argument presented by Applicant. The Examiner did not consider on the record any of the arguments traversing the rejections based on the cited art. Thus, the Examiner has not only failed to "answer the substance" of Applicant's arguments but also failed to "take note" of them.

In the remarks of the Amendment, Exhibit B at page 5, Applicant stated that claim 23 provides that the oxide superconductor coated by the conductive material has gaps or voids which are filled and, accordingly, the material is solid, rather than hollow. This is supported by the disclosure found in Figure 1. Yurek discloses a tube consisting of metal or a metal alloy having a coating of a superconducting oxide on the inside or outside surface of the tube, or both. Any of these embodiments would result in a

hollow wire, not a solid one, as is disclosed in the presently claimed invention.

With respect to Claim 1, Applicant argued that Den does not remedy the deficiencies of Yurek, as set forth above. Den discloses an Ln-Sr-Cu-M-O superconducting oxide, but does not teach or suggest mixing the oxide with a metallic material, or providing an outer coating of a conductive material that has a higher melting point than the metallic material.

The Examiner's second Office Action merely repeated the prior art rejections without addressing the above explanation advanced in Applicant's Amendment. The Examiner's repeated assertion that selecting a conductive material, such as aluminum, copper, gold or an alloy thereof would necessarily make the melting point of the conductive material higher than silver is without merit. While aluminum is a suitable conductive material, its melting point is considerably lower than that of silver.

Applicant requests an explanation of the reasons the Examiner was not persuaded by the arguments presented in Applicant's Amendment. Without clarification, and the

Examiner has produced none, Applicant is simply unable to frame a cogent response.

III. REQUEST FOR REMOVAL OF FINALITY

Applicant submits that the instant Office Action was made final prematurely. As set forth in M.P.E.P. § 706.06:

[W]here a single previous Office action contains a complete statement of a ground of rejection, the final rejection may refer to such a statement and also should include a rebuttal of any arguments raised in the applicant' reply.

M.P.E.P. § 706.06 (emphasis added).

As already set forth at length above, the second Office Action failed to include any rebuttal of the arguments presented in Applicant's Amendment, and thus fell short of complying with M.P.E.P. § 706.06. Applicant therefore requests that the finality of the rejection be withdrawn pursuant to M.P.E.P. § 706.07(d).

CONCLUSION

For the above reasons, Applicant requests that a new action be issued answering the arguments presented,

allowing the application and/or removing the finality of the second Office Action.

In the event that this request is denied, this paper should be treated as a petition to the Commissioner to withdraw the second Office Action, or, alternatively, to clarify and reconsider said Office Action, and further, to remove its finality. Applicant respectfully requests the Commissioner to issue a new Office Action, resetting the period for response and/or taking other responsive action, in response to this paper and Applicant's Amendment filed July 20, 2000.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



Attorney for Applicant

Registration No. 21447

FITZPATRICK, CELLA, HARPER & SCINTO
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New York, New York 10112-3801
Facsimile: (212) 218-2200

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JAN 25 2000



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

CELLA HARPER SCINTO		FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	
APPLICATION NO.	FILING DATE				
08/528,538	09/14/95	KANEKO		N 35,61548	
				EXAMINER	
				CUNEO, K	
ART UNIT		PAPER NUMBER			
2831		30			

005514
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK NY 10112

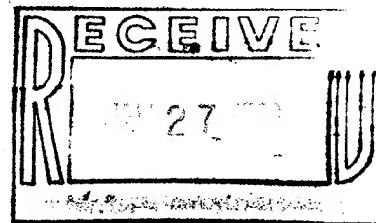


DATE MAILED: 01/20/00

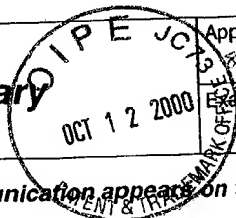
Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

FILE NO. 3271548
ATTORNEY JWB/DCP
DUE DATE 4/20/00
1/25/00



Office Action Summary



Application No.

8/528438

Applicant(s)

KANEKO

Examiner

Cano

Group Art Unit

2831

--The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address--

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on 10/6/97
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☐ Claim(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 is/are pending in the application.
- ☐ Of the above claim(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 is/are withdrawn from consideration.
- ☐ Claim(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 is/are allowed.
- ☐ Claim(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 is/are rejected.
- ☐ Claim(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 is/are objected to.
- ☐ Claim(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on 10/6/97 is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on 10/6/97 is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Serial Number: 08/528538
Art Unit: 2831

2

DETAILED ACTION

Treatment of Claims Based on Prior Art

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23, 2-3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yurek et al. (US 5545613, hereafter referred to as Yurek).

Yurek discloses a wire of a superconductive material where the grains of the material are compact and adhered together (sintered and compact) with silver (claim 2) filling the voids of the superconductive material in Example 7 prepared with the oxide-metal composite of Example 2, placed in the inside of a metal tube (conductive material) and composing a wire, column 3 at lines 12-23, 63-67 and column 4 at lines 1-3.

Yurek discloses the claimed invention except the composition of the conductive material, thereby the higher melting point of the conductive material. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the conductive material of the Yurek wire copper, gold or aluminum (claim 3), or an alloy thereof (claim 22), because it is well known in the superconducting arts to make the outer sheath of wires from these metals and their alloys. Selecting the conductive material as such necessarily makes the melting point of the conductive material higher than the solidified metallic material, silver (claim 23).

Serial Number: 08/528538
Art Unit: 2831

3

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yurek, as applied to claim 23 above, and Den et al. (US 5,512,538, hereafter referred to as Den).

Yurek discloses the claimed invention except for the superconducting oxide being Ln-Sr-Cu-M-O. Yurek does state that the invention is applicable to any superconducting oxide, column 2 at lines 43-44. Den discloses this type of superconducting oxide, reference the abstract.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconductive oxide of Den to provide the superconductive material of Yurek, because this type of superconducting oxide is one of many oxides known in the art for making superconductive wires.

Response to Arguments

4. Applicant's arguments have been carefully reviewed, but are moot in view of the new grounds of rejection to claim 23.

Closing

5. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Examiner Kamand Cuneo at (703) 308-1233. Examiner Cuneo's supervisor is Examiner Kristine Kincaid whose telephone number is (703) 308-0640.

Kristine Kincaid

W
kc

January 8, 2000

Revision of Patent and Trademark Fees for Fiscal Year 2000
In view of the American Inventors Protection Act of 1999, Public Law 106-113

The following amendments to the fee amounts in 37 CFR 1.16, 1.20, and 1.492 shown below will be effective on December 29, 1999:

Patent Fees:

37 CFR

Sec.	Description	Current Fee Amount	New Fee Amount (Effective 12/29/99)
1.16(a)	Basic filing fee – Utility	\$760	\$690
1.16(a)	Basic filing fee – Utility (Small Entity)	\$380	\$345
1.16(a)	Basic filing fee – Utility (CPA)	\$760	\$690
1.16(a)	Basic filing fee – Utility (CPA) (Small Entity)	\$380	\$345
1.16(h)	Reissue filing fee	\$760	\$690
1.16(h)	Reissue filing fee (Small Entity)	\$380	\$345
1.16(h)	Reissue filing fee (CPA)	\$760	\$690
1.16(h)	Reissue filing fee (CPA) (Small Entity)	\$380	\$345
1.20(e)	Maintenance fee – due at 3.5 years	\$940	\$830
1.20(e)	Maintenance fee – due at 3.5 years (Small Entity)	\$470	\$415
1.492(a)(2)	ISA - U.S.	\$760	\$690
1.492(a)(2)	ISA - U.S. (Small Entity)	\$380	\$345

The following amendments to the fee amounts in 37 CFR 1.17 and 2.6 shown below will be effective on January 10, 2000:

Patent Fees:

37 CFR

Sec.	Description	Current Fee Amount	New Fee Amount (Effective 1/10/00)
1.17(r)	Filing a submission after final rejection (1.129(a))	\$760	\$690
1.17(r)	Filing a submission after final rejection (1.129(a)) (Small Entity)	\$380	\$345
1.17(s)	Per additional invention to be examined (1.129(b))	\$760	\$690
1.17(s)	Per additional invention to be examined (1.129(b)) (Small Entity)	\$380	\$345

Trademark Fees:

37 CFR

Sec.	Description	Current Fee Amount	New Fee Amount (Effective 1/10/00)
2.6(a)(1)	Application for registration, per class	\$245	\$325
2.6(a)(4)	Extension for filing Statement of Use, per class	\$100	\$150
2.6(a)(5)	Application for renewal, per class	\$300	\$400
2.6(a)(13)	Filing section 15 affidavit, per class	\$100	\$200
2.6(a)(16)	Petition for cancellation, per class	\$200	\$300
2.6(a)(17)	Notice of opposition, per class	\$200	\$300

Patent and trademark customers are responsible for paying the correct fee amounts. We advise our customers to refer to the official PTO Web site at www.uspto.gov or contact the PTO General Information Services Division at (703) 308-4357 or (800) PTO-9199 for the most current fee amounts and information.

35.G1548

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
	:	Examiner: Cuneo, K.
NORIO KANEKO)	
	:	Group Art Unit: 2831
Application No.: 08/528,538)	
	:	
Filed: September 14, 1995)	
	:	
For: OXIDE SUPERCONDUCTING)	
WIRE WITH SILVER	:	
DISPERSED WITHIN AND)	
A CONDUCTIVE COATING	:	
ON ITS SURFACE (AS)	
AMENDED)	:	July 20, 2000

Commissioner for Patents
Washington, D.C. 20231

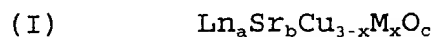
AMENDMENT AND PETITION FOR EXTENSION OF TIME

Sir:

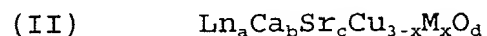
Applicant petitions to extend the time for response to the Office Action, dated January 20, 2000, for three months, to July 20, 2000. A check in the amount of \$870.00 for payment of the extension fee is enclosed. Please charge any additional fee required for the extension, and credit any overpayment, to Deposit Account 06-1205.

IN THE CLAIMS:

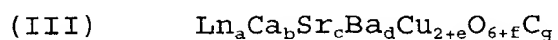
1. (Five Times Amended) A superconducting wire according to claim 23, wherein said oxide superconductor is composed of one of the materials selected from the group consisting of the following materials disclosed in (I) to (V):



where $2.7 \leq a + b \leq 3.3$, $0.8 \leq a \leq 1.2$, $6 \leq c \leq 9$, and $0.05 \leq x \leq 0.7$; Ln consists of at least one type of element or atomic group selected from the element group of Y and a lanthanide element; and M consists of at least one type of element or atomic group selected from the element group of Ti, V, Ga, Ge, Mo, W, and Re;

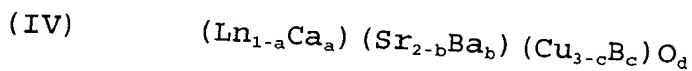


where $2.7 \leq a + b + c \leq 3.3$, $0.8 \leq a + b \leq 2.1$, $6 \leq d \leq 9$, $0.05 \leq b \leq 1.1$, and $0.05 \leq x \leq 1.0$; Ln consists of at least one type of element or atomic group selected from the element group of Y and a lanthanide element; and M consists of at least one type of element or atomic group selected from the element group of Fe, Co, Ti, V, Ge, Mo, Re, and W;



where $a + b + c + d = 3$, $0.2 \leq a \leq 0.8$, $0.2 \leq b \leq 1.0$, $0.5 \leq c \leq 2.2$, $0 \leq d \leq 1.6$, $0 \leq e \leq 0.8$, $0 \leq f \leq 2$, and $0.2 \leq g \leq 1.0$; and Ln

consists of at least one type of element or atomic group selected from the element group of Y and a lanthanide element;



where $0.1 \leq a \leq 0.5$, $0.7 \leq b \leq 1.7$, $0.1 \leq c \leq 0.5$, and $6.5 \leq d \leq 7.5$; and Ln consists of at least one type of element or atomic group selected from the element group of Y and a lanthanide element excluding Ce and Tb;

(V) where the oxide superconductor is composed of Ln, M, Ba, Cu, Ti, O; where Ln consists of at least one type of element or atomic group selected from the element group of Y, La, Pr, Nd, Sm, Eu, Gd, Dy, Ho, Er, Tm, Yb, and Lu; and M consists of at least one element or atomic group selected from the group consisting of Ca and Sr.

3. (Four Times Amended) A superconducting wire according to Claim 23, wherein said conductive material is a metal which is selected from the group consisting of Au, [Al,] Cu, Ni, Pd, Pt, Ti, Mo, W, Nb, and Mn.

22. (Twice Amended) A superconducting wire according to claim 23, wherein said conductive material is an alloy of

metals selected from the group consisting of Au, Al, Cu, Ni, Pd, Pt, Ti, Mo, W, Nb, and Mn.

REMARKS

Reconsideration and allowance of the pending claims is respectfully requested.

Claims 1-3 and 22-23 are pending in the present application, with Claim 23 being the sole independent claim. Claims 1, 3 and 22 have been amended.

Claims 2-3 and 22-23 are rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,545,613 (Yurek, et al.). Claim 1 is rejected under 35 U.S.C. § 103(a) as obvious over Yurek, et al. in view of U.S. Patent No. 5,512,538 (Den, et al.). Applicant respectfully traverses these rejections.

The rejection of Claims 2-3 and 22-23 as obvious over Yurek et al. is considered improper because of the failure to cite a reference to support the allegation that it was well-known in the art to ensheath superconducting oxides in copper, gold, aluminum, or an alloy thereof. Applicant traverses this assertion, and respectfully requests that a secondary reference be provided in support of this allegation. See 37 C.F.R. 1.104(d) (2) and MPEP 2144.03.

Claim 23 provides that the oxide superconductor coated by the conductive material has gaps or voids which are filled and, accordingly, the material is solid, rather than hollow. This is supported by the disclosure found in Figure 1. Yurek, et al. discloses a tube consisting of metal or a metal alloy having a coating of a superconducting oxide on the inside or outside surface of the tube, or both. Any of these embodiments would result in a hollow wire, not a solid one, as is disclosed in the presently claimed invention.

With respect to Claim 1, Den, et al. does not remedy the deficiencies of Yurek, et al., as set forth above. Den, et al. discloses an Ln-Sr-Cu-M-O superconducting oxide, but does not teach or suggest mixing the oxide with a metallic material, or providing an outer coating of a conductive material that has a higher melting point than the metallic material.

Favorable reconsideration of the present application and prompt passage to issue are respectfully requested.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

Attorney for Applicant

Registration No. _____

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

8/52858
SERIAL NUMBER FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO.



EXAMINER

ART UNIT PAPER NUMBER 32

FILE NO. 011111
ATTORNEY
DUE DATE 12/26/00-1/26/01
DOCKETED 9/29/00 DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☒ Responsive to communication filed on 7/24/00 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☐ Notice of Informal Patent Application, PTO-152.

Part II SUMMARY OF ACTION

- ☒ Claims 1-3, 22, 23 are pending in the application.
Of the above, claims are withdrawn from consideration.
- ☐ Claims have been cancelled.
- ☐ Claims are allowed.
- ☒ Claims 1-3, 22, 23 are rejected.
- ☐ Claims are objected to.
- ☐ Claims are subject to restriction or election requirement.
- ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
- ☒ The proposed drawing correction, filed 3/14/98, has been ☒ approved; ☐ disapproved (see explanation).
- ☒ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☒ been received ☐ not been received ☐ been filed in parent application, serial no. filed on
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 493 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

Serial Number: 08/528538
Art Unit: 2841

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alloys, as evinced by Shi and Paranthaman. Selecting the conductive material as such necessarily makes the melting point of the conductive material higher than the solidified metallic material, silver (claim 23).

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yurek, as applied to claim 23 above, and Den et al. (US 5,512,538, hereafter referred to as Den).

Yurek discloses the claimed invention except for the superconducting oxide being Ln-Sr-Cu-M-O. Yurek does state that the invention is applicable to any superconducting oxide, column 2 at lines 43-44. Den discloses this type of superconducting oxide, reference the abstract.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconductive oxide of Den to provide the superconductive material of Yurek, because this type of superconducting oxide is one of many oxides known in the art for making superconductive wires.

Response to Arguments

4. Applicant's argument has been carefully reviewed, but is not persuasive. Applicant alleges that the rejection is improper because a reference stating that use of copper, gold or aluminum as an outer tube is well known. Applicant challenges the commonness of gold, copper or aluminum as an outer tube, because a reference is not provided. First, applicant errs in asserting that the rejection is improper; a rejection based on common knowledge is proper even if a reference is not provided. Second, in challenging what examiner considers well know, applicant has not provided adequate information to raise reasonable doubt, on its face, regarding examiner's position. Applicant merely

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objects to the position without giving any reason. Third, in compliance with applicant's request, examiner has cited a couple of references in support of her position. As can be clearly seen, the knowledge is old in the art.

5. MPEP 2144.03 states:

If the examiner adds a reference to the rejection in the next action after applicant's rebuttal, the newly cited reference, if it is added merely as evidence of the prior well known statement, does not result in a new issue and thus the action can potentially be made final. If no amendments are made to the claims, the examiner must not rely on any other teachings in the reference if the rejection is made final.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

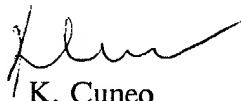
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Serial Number: 08/528538
Art Unit: 2841

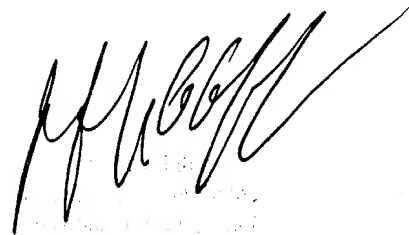
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Closing

6. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Examiner Kamand Cuneo at (703) 308-1233. Examiner Cuneo's supervisor is Examiner Jeffrey Gaffin whose telephone number is (703) 308-3301.



K. Cuneo
Patent Examiner Group 2841
September 25, 2000



DETAILED ACTION

Treatment of Claims Based on Prior Art

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23, 2-3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yurek et al. (US 5545613, hereafter referred to as Yurek) and Shi et al. (Swagged Superconducting Wires, hereafter Shi) and Paranthaman et al. (Formation of Anisotropic Tl-1212, Tl-2212, Tl-1223 and Tl-2223 Particles using Aerosol Flow Reacted Powders, hereafter Paranthaman).

Yurek discloses a wire of a superconductive material where the grains of the material are compact and adhered together (sintered and compact) with silver (claim 2) filling the voids of the superconductive material in Example 7 prepared with the oxide-metal composite of Example 2, placed in the inside of a metal tube (conductive material) and composing a wire, column 3 at lines 12-23, 63-67 and column 4 at lines 1-3.

Yurek discloses the claimed invention except the composition of the conductive material, thereby the higher melting point of the conductive material. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the conductive material of the Yurek wire copper, gold or aluminum (claim 3), or an alloy thereof (claim 22), because it is well known in the superconducting arts to make the outer sheath of wires from these metals and their

TO SEPARATE, HOLD TOP AND BOTTOM EDGES, SNAP-APART AND DISCARD CARBON

FORM PTO-892 (REV. 2-92)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NO. 8/528538		GROUP/ART UNIT 2541		ATTACHMENT TO PAPER NUMBER 32				
NOTICE OF REFERENCES CITED				APPLICANT(S)								
U.S. PATENT DOCUMENTS												
		DOCUMENT NO.				DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE		
A												
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FOREIGN PATENT DOCUMENTS												
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L												
M												
N												
O												
P												
Q												
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)												
	R	Formation of Anisotropic Ti-1212, Ti-2212, Ti-1223 and Ti-2223 Particles using Novel Flow Reacted Process, Parmanian et al										
	S	IEEE Trans. Appl. Superconducting, Vol. 5, No. 2, 6/95										
	T	"Superconducting Wires", Shi et al, MAT. TRANS. J. Vol. 7, No. 12, 3/89										
	U											
EXAMINER						DATE						
K. C. L.						9/23/00						
* A copy of this reference is not being furnished with this office action. (See Manual of Patent Examining Procedure, section 707.05 (a).)												